

## Abstracts

A91

**PHP51**  
**CONSUMER KNOWLEDGE AND BELIEFS REGARDING ANTIBIOTIC RESISTANCE: A TELEPHONE SURVEY AND FOCUS GROUP INTERVIEW**

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**OBJECTIVES:** This study was performed to examine knowledge and attitudes regarding antibiotic resistance. **METHODS:** We conducted both quantitative study and qualitative study. For a quantitative study, a cross-sectional telephone survey was conducted in 2009 on 1015 persons aged 20 or older. The questionnaires consisted of consumer knowledge, attitudes and beliefs about antibiotic resistance. For a qualitative study, we asked similar questions to the 9 participants. **RESULTS:** In the telephone survey, 75.9% of respondents agreed that antibiotic resistance means that a microorganism has the ability of withstanding the effects of antibiotics. Perception of antibiotic resistance was significantly different according to education, household income. The respondents who had better education and higher household income responded they knew well about antibiotic resistance. All of the FGI participants have ever heard about antibiotic resistance, but they didn't understand that exactly. They described antibiotic resistance as body becoming immune or resistant to antibiotics through antibiotic use. They also thought that antibiotic resistance would not influence their health because they were healthy and did not take antibiotics much. **CONCLUSIONS:** Most respondents were aware of antibiotic resistance. However, when we conducted FGI, we found there was some confusion among participants about the meaning of antibiotic resistance. Because incorrect knowledge for antibiotic resistance may lead to inappropriate health behavior such as low compliance with antibiotics, further public education and publicity program is needed.

**PHP52**  
**PREVALENCE AND PREDICTORS OF UNINTENTIONAL NON-ADHERENCE AMONG ADULTS WITH CHRONIC DISEASE WHO SELF-IDENTIFY AS BEING ADHERENT TO PRESCRIPTION MEDICATIONS**

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**OBJECTIVES:** Unintentional non-adherence has been characterized as passively inconsistent medication-taking behavior (negligence, carelessness, or forgetfulness). Our objective was to study the prevalence and predictors of unintentional non-adherence. **METHODS:** We conducted a cross-sectional survey of adults with asthma, hypertension, diabetes, hyperlipidemia, osteoporosis, or depression from the Harris Chronic Disease Panel. A total of 24,071 adults self-identified themselves as adherent to prescription medications for their index disease and answered three questions on unintentional non-adherence: During the past six months, did you 1) ever forget to take the medication; 2) run out of the medication; and 3) were careless at times about taking the medication? Logistic regression was used to model predictors of each unintentional non-adherence behavior. Independent variables were demographics, index chronic disease, total number of prescription medications, self-rated health, and multi-item scales assessing perceived need for medications, medication concerns, and perceived medication affordability. **RESULTS:** For the index disease: 62% forgot to take a medication, 37% had run out of the medication, and 23% were careless about taking the medication. Common multivariate predictors ( $p < .001$ ) of the three behaviors were: 1) lower perceived need for medications; 2) more medication affordability problems; 3) worse self-rated health; 4) diabetes or osteoporosis (relative to hypertension); and 5) younger age. Unique predictors of 'forgot to take medications' were higher concerns about the index medication and male gender. Unique predictors of 'run out of medications' were non-white race, asthma, and higher number of total prescription medications. The unique predictor of 'being careless' was higher medication concerns. **CONCLUSIONS:** Unintentional non-adherence does not appear to be random and is predicted by medication beliefs, chronic disease, and sociodemographics. Interventions addressing unintentional non-adherence should not simply focus on reminders, but should also address medication beliefs related to perceived need, concerns, and medication affordability.

**PHP53**  
**PATIENTS USING SPECIALTY PHARMACIES FOR A TUMOR NECROSIS FACTOR ANTAGONIST HAD GREATER REFILL ADHERENCE THAN THOSE USING A RETAIL PHARMACIES**Liu Y<sup>1</sup>, Chao J<sup>2</sup>, Yang M<sup>2</sup>, Mulani P<sup>2</sup><sup>1</sup>University of Missouri-Kansas City, Kansas City, MO, USA, <sup>2</sup>Abbott Laboratories, Abbott Park, IL, USA

**OBJECTIVES:** Retail pharmacies provide regular prescription drugs and some specialty prescription drugs, whereas specialty pharmacies focus on distributing specialty prescription drugs, including tumor necrosis factor (TNF) antagonists. It is unknown whether pharmacy type impacts patients' adherence to anti-TNF therapy. We examined the relationship between pharmacy type (specialty vs. retail) and refill adherence to the TNF antagonist adalimumab. **METHODS:** This was a retrospective analysis of prescription drug claims of patients in the United States using a TNF antagonist (adalimumab 40 mg/8-mL injection) during a dispensation period from January 2003 to August 2009. Patients treated with adalimumab were included in the analysis regardless of diagnosis. For each patient, medication refill adherence (MRA) was calculated as "total days of supply" divided by "total number of days evaluated," multiplied by 100. A regression analysis was conducted, in which the dependent variable was MRA and the independent variables included source of obtaining medication, reimbursement/payment type, total copayment/payment amount, age, sex, ethnicity,

and annual income. **RESULTS:** Of the 86,943 patients included, 69% obtained the medication from a specialty pharmacy, 92% were members of Blue Cross and Blue Shield plans, 67% were women, and 81% were white. Average MRA was 84, and average age was 52 years. Significant predictors ( $p < 0.05$ ) of MRA included source where medication was obtained, reimbursement/payment type, total copayment/payment amount, age, sex, and ethnicity; source where medication was obtained was the strongest predictor. MRA was 16% lesser for patients using a retail pharmacy vs. patients using a specialty pharmacy, controlling for the other independent variables. **CONCLUSIONS:** Patients using a specialty pharmacy to obtain a TNF antagonist had a greater refill adherence than patients using a retail pharmacy. A specialty pharmacy usually provides services such as proactive refill management and medication adherence monitoring, which may improve patients' adherence to therapy.

**PHP54**  
**STUDY THE IMPACT OF AUTOREFILL PROGRAM ON MEDICATION ADHERENCE**

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**OBJECTIVES:** To evaluate the impact of an automated prescription refill intervention program on medication adherence. **METHODS:** A retrospective pre-post with case and control cohort study design was employed using a large administrative pharmacy claim database. An automated prescription refill program was implemented in January 2009 across five pharmacy stores. Patients who filled at least one maintenance medication during January of 2009 in either of five pre-identified test or five pre-identified control pharmacy retail stores were included in the test or control groups. Individual patients' 6-months pre and 6-months post adherence was compared by measuring mean Medication Possession Ratio (MPR). Relationship between Autorefill program and medication adherence was investigated by linear regression models. **RESULTS:** A total of 14,904 patient records from test group and 26,911 patient records from control group were identified and included in the study. Mean age for test group was higher than control group patients (60 vs 55). Both groups had similar gender distribution (Females-Test 60.5% vs 60.4% control). Mean MPR for test group was found to be higher than control group (68% vs 60%). After controlling for demographic factors and pre-index MPRs, test group showed a significant 4% increase in the mean MPR as compared to the control group patients ( $p < 0.05$ ). Drill-down analyses were conducted across top five therapeutic classes including antihypertensives, antihyperlipemics, antidepressants, contraceptives, and antidiabetics. Test group patients for all classes except antihypertensive and contraceptive agents reported significantly higher mean MPR than control group patients ( $p < 0.05$ ). Test patients using antihypertensive or contraceptive agents showed a higher mean MPR as compared to control group patients, however, those differences were not found to be statistically significant. **CONCLUSIONS:** Study findings suggest that automated prescription refill intervention program may have had a positive impact on patients' adherence, especially in patients who were filling their antihyperlipidemic, antidepressant or antidiabetic medications.

**PHP55**  
**A SHORT 10-ITEM MEASURE OF COLLABORATIVE CLINICAL TEAM WORKING: THE WORKING IN HEALTH CARE QUESTIONNAIRE (WHQ-10)**Martin CR<sup>1</sup>, Redshaw M<sup>2</sup><sup>1</sup>University of the West of Scotland, Ayr, UK, <sup>2</sup>University of Oxford, Oxford, UK

**OBJECTIVES:** Effective delivery of clinical care for women during pregnancy and the perinatal period is contingent on collaborative and supportive multidisciplinary team working. The current study reports the development of a short measure of effective and supportive team working within the context of maternity care services. The psychometric properties of the developed tool are described. **METHODS:** The tool was developed as an intrinsic component part of a staff survey reviewing maternity services in England, UK. Final item inclusion in the developed measure was determined by exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Discriminate validity testing was conducted using analysis of variance (ANOVA) was used to determine discriminate validity using health worker classification as the independent variable. **RESULTS:** A total of 1701 questionnaires selected by random sampling were subjected to EFA. Following maximum-likelihood extraction and oblimin rotation, two correlated factors were identified. These two sub-scales were labelled compliance and influence (4 items), and support and communication (6 items). The veracity of the factor structure and sub-scale differentiation was supported by CFA conducted on a further 1701 questionnaires. Discriminate validity was demonstrated on the total scale and both sub-scales (all  $p < 0.001$ ). **CONCLUSIONS:** The 10-item Working in Healthcare Questionnaire (WHQ-10) is a valid and reliable self-report instrument that assesses the important dimensions of staff collaboration and cohesion. The sub-scales of the instrument are sensitive to staff structure and clinical discipline of the practitioner and facilitates a useful measure to facilitate understanding of the dynamic processes of staff interaction within the clinical environment.

**PHP56**  
**IMPACT OF ENROLLING IN A CONSUMER-DRIVEN HEALTH PLAN (CDHP) ON MEDICATION ADHERENCE**

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**OBJECTIVES:** To evaluate the impact of enrolling in a consumer-driven health plan (CDHP) on adherence to maintenance drugs. **METHODS:** Using a two-year (pre-year